

**What is claimed is:**

1. A lie-down massager, comprising:
  - a) a base frame having an elongated top panel,  
wherein an elongated top opening is formed  
centrally and lengthwise through the elongated  
top panel;
  - b) a rider provided below the elongated top panel  
of the base frame;
  - c) a guide member movably engaged between the base  
frame and the rider so as to enable the rider  
to make a horizontally reciprocal movement  
relative to the base frame;
  - d) a lifter having a top plate and a bottom plate,  
a hydraulic actuator fixed to the bottom plate,  
and a hydraulic controller, wherein the  
hydraulic controller controls operation of the  
hydraulic actuator, wherein the top plate has a  
top upper surface portion and a top lower  
surface portion, wherein the bottom plate has a  
bottom upper surface portion and a bottom lower  
surface portion, wherein the hydraulic actuator  
has a hollow cylinder, a plunger reciprocating  
in the cylinder, and a shaft fixed to the  
plunger and the top plate;

- e) one or more lifter guides extending downward  
from the top lower surface portion of the top  
plate;
  - f) one or more lifter guide bushes extending  
5 upward from the bottom upper surface portion of  
the bottom plate to releasably receive the  
lifter guides;
  - g) massage bumps attached to the top upper surface  
portion of the lifter and moving vertically  
10 and/or horizontally along the elongated top  
opening of the elongated top panel of the base  
frame.
2. The lie-down massager of claim 1 further comprising  
15 a pad covering the massage bumps and the elongated  
top opening of the base frame.
3. The lie-down massager of claim 1 wherein the massage  
bumps are partitioned to first and second pairs,  
20 wherein the first pair bumps are aligned parallel to  
the second pair bumps.
4. The lie-down massager of claim 3 further comprising:  
a) first and second bump holders propping and  
25 maintaining the first and second pair bumps

above the top plate of the lifter, wherein the first and second bump holders are tapered toward each lower end thereof; and

b) a first engagement member to rockingly engage the lower ends of the bump holders to the top plate of the lifter.

5. The lie-down massager of claim 4 further comprising a second engagement member to rollingly engage the message bumps thereto.

6. The lie-down massager of claim 4 wherein the message bumps are roller balls.

7. The lie-down massager of claim 6 wherein the roller balls are formed of jade.

8. The lie-down massager of claim 1 wherein each of the message bumps includes a heater.

9. The lie-down massager of claim 8 wherein the heater is a heating lamp generating heat and infrared rays.

10. The lie-down massager of claim 1 wherein the guide member comprises:

- a) one or more roller gear engaged to and powered by a roller gear motor, wherein the roller gear motor is fixed to the rider; and
- b) one or more side rack gears parallel to each other and provided lengthwise in the base frame;

wherein the roller gears are rollably connected to the rider and rotatably mounted on the side rack gears.

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11. The lie-down massager of claim 1 wherein the guide member comprises:

- a) rider guide rollers provided on each side of the rider, wherein the rider guide rollers are rollably engaged to the base frame to guide a horizontally reciprocal movement of the rider;
- b) a pair of pulleys linked by a rope and respectively mounted in a front end portion and a rear end portion of the base frame, wherein a predetermined portion of the rope is fixedly attached to the rider so that the pulley rotation enables the rider to generate a horizontally reciprocal movement of the rider;

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12. The lie-down massager of claim 11 wherein the pulleys are relatively twisted by 90 degrees against each other.
- 5 13. The lie-down massager of claim 1 further comprising:
- a) a pair of roller coasters parallel to each other, wherein the roller coasters are attached to the base frame, wherein each of the roller coasters has a substantially waved top surface;
- 10 and
- b) coaster guide rollers formed outwardly extending from each side of the lifter, wherein the coaster guide rollers enable the lifter to make a roller coasting movement on and along
- 15 the waved top surfaces of the roller coasters.
14. The lie-down massager of claim 13 wherein each of the waved top surfaces of the roller coasters substantially forms a curvature of a human spinal
- 20 cord.
15. The lie-down massager of claim 13 wherein the lifter further comprises a plurality of elongated guides extending downward from the bottom lower surface
- 25 portion of the bottom plate, and the rider further

comprises a plurality of guide bushes upwardly  
formed on the rider to releasably receive the  
elongated guides so as to stabilize the roller  
coasting movement of the lifter along the roller  
5 coasters.

16. The lie-down massager of claim 15 wherein the  
elongated guides are shaped in pins.

10 17. The lie-down massager of claim 1 wherein the  
cylinder of the hydraulic actuator comprises a upper  
hole positioned near one end of the hydraulic  
actuator that is directed toward the top plate of  
the lifter, and a lower hole positioned near the  
15 other end of the hydraulic actuator, wherein the  
hydraulic controller supplies hydraulic fluid to the  
cylinder via the lower hole and recovers hydraulic  
fluid via the upper hole when the hydraulic actuator  
lifts the top plate, and wherein the hydraulic  
20 controller supplies hydraulic fluid to the cylinder  
via the upper hole and recovers hydraulic fluid via  
the lower hole when the hydraulic actuator lowers  
the top plate.

18. The lie-down massager of claim 17 wherein the hydraulic controller comprises a pump that pressurizes hydraulic fluid, and a valve assembly that selectively provides hydraulic fluid to the hydraulic actuator.
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19. The lie-down massager of claim 18 wherein the valve assembly comprises a valve chamber, a first piston, a second piston, a valve conduit and a valve rod, wherein the first piston and the second piston are fixed to the valve rod and move reciprocally in the valve chamber, wherein the valve chamber comprises a first hole, a second hole, a third hole, a fourth hole, a fifth hole, a sixth hole and a first rod hole, wherein the valve rod extends out of the valve chamber through the first rod hole, wherein the valve conduit is positioned outside the valve chamber and connects the fifth hole and the sixth hole, wherein the hydraulic controller further comprises a first conduit that connects the first hole of the valve chamber and the upper hole of the hydraulic actuator, a second conduit that connects the pump and the second hole of the valve chamber, a third conduit that connects the third hole of the valve chamber and the lower hole of the hydraulic
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actuator, a fourth conduit that connects the fourth hole and the pump, wherein when the top plate is lifted, the first piston and the second piston are moved to a lifting position in which the first piston and the second piston partition the valve chamber such that hydraulic fluid flows from the pump to the lower hole of the hydraulic actuator via the second conduit and the third conduit so that the plunger is pushed upward, and hydraulic fluid flows from the upper hole of the hydraulic actuator to the pump via the first conduit, the valve conduit, and the fourth conduit so that hydraulic fluid is recovered, wherein when the top plate is lowered, the first piston and the second piston are moved to a lowering position in which the first piston and the second piston partition the valve chamber such that hydraulic fluid flows from the pump to the upper hole of the hydraulic actuator via the first conduit and the second conduit so that the plunger is pushed downward, and hydraulic fluid flows from the lower hole of the hydraulic actuator to the pump via the third conduit and the fourth conduit so that hydraulic fluid is recovered, wherein when the top plate is neither lifted nor lowered, the first piston and the second piston are moved a neutral

position in which the first piston and the second piston block the first hole and the third hole such that hydraulic fluid flow between the hydraulic controller and the hydraulic actuator does not occur.

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20. The lie-down massager of claim 19 wherein the hydraulic controller further comprises a hydraulic fluid accumulator between the pump and the valve assembly, wherein the hydraulic fluid accumulator stores pressurized hydraulic fluid.

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21. The lie-down massager of claim 19 wherein the hydraulic controller further comprises a first solenoid that applies force to move the valve rod of the valve assembly into or out of the valve chamber such that the first piston and the second piston are moved to the lifting position or the lowering position, and a first spring fixed between the first solenoid and the valve chamber to return the first piston and the second piston to the neutral position when no force is applied by the first solenoid.

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22. The lie-down massager of claim 21 wherein the hydraulic controller further comprises a link connected between the valve rod and the first

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solenoid, wherein the link reverses direction of movement of the first solenoid, and the first spring is fixed between the valve chamber and the link.

- 5    23.    The lie-down massager of claim 19 wherein the hydraulic controller further comprises a second solenoid that applies force to move the valve rod of the valve assembly into or out of the valve chamber such that the first piston and the second piston are
- 10    moved to the lifting position or the lowering position, and a second spring fixed between the second solenoid and the valve chamber to return the first piston and the second piston to the neutral position when no force is applied by the first
- 15    solenoid, wherein the valve chamber further includes a second rod hole that is opposite to the first rod hole, and the valve rod extends out of the valve chamber through the second rod hole.